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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,322	09/18/2006	Akinari Sugiyama	060706	7552
23850 7590 09/09/2008 KRATZ, QUINTOS & HANSON, LLP 1420 K Street, N.W. Suite 400 WASHINGTON, DC 20005				
EXAMINER				
NWAONICHA, CHUKWUMA O				
ART UNIT		PAPER NUMBER		
1621				
MAIL DATE		DELIVERY MODE		
09/09/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/593,322

**Applicant(s)**

SUGIYAMA ET AL.

**Examiner**

CHUKWUMA O. NWAONICHA

**Art Unit**

1621

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SE-US)  
Paper No(s)/Mail Date 12/14/2006
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### **Current Status**

1. Claims 1-20 are pending in the application.

### ***Priority***

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kazuyoshi et al., {JP 2004-244401}.

Applicants claim a method for producing a fluorine-containing halide, comprising reacting a fluorine-containing sulfonyl halide with a metal halide in the presence or absence of a solvent; wherein all the variables are as defined in the claims.

**Determination of the scope and content of the prior art (M.P.E.P. §2141.01)**

Kazuyoshi et al. teach a method for producing the fluorine-containing fluorosulfonylalkyl vinyl ether expressed by the formula:  
$$\text{CF}_2=\text{CFO}(\text{CF}_2\text{CF}(\text{CF}_3)\text{O})_n\text{CF}_2\text{CF}_2\text{SO}_2\text{F}$$
 [wherein, (n) is 0 or 1] is characterized by using water as a solvent, performing the reaction of a fluorine-containing chlorosulfonylalkyl vinyl ether expressed by the formula:  $\text{CF}_2=\text{CFO}(\text{CF}_2\text{CF}(\text{CF}_3)\text{O})_n\text{CF}_2\text{CF}_2\text{SO}_2\text{Cl}$  [wherein, (n) is the same as above] with a fluorinating agent expressed by the formula:  $\text{MF}(\text{HF})_m$  [wherein, M is an alkali metal: and (m) is 0-5].

**Ascertainment of the difference between the prior art and the claims (M.P.E.P., §2141.02)**

Kazuyoshi et al. method for preparing a method for producing a fluorine-containing halide differs from the instantly claimed process in that applicants claim a process comprising metal Br or I while Kazuyoshi et al. teach a process comprising metal fluoride.

**Finding of prima facie obviousness--rational and motivation (M.P.E.P., §2142-2143)**

The instantly claimed method for preparing a method for producing a fluorine-containing halide is obvious to one of ordinary skill in view of the teaching of Kazuyoshi et al.

One of ordinary skill in the art would have a reasonable expectation of success in practicing the instant invention by mixing metal halide with fluorine-containing sulfonyl halide by following the teaching of Kazuyoshi et al. to arrive at the instantly claimed method for preparing a method for producing a fluorine-containing halide. Said person would have been motivated to practice the teaching of the reference cited because it demonstrates that fluorine-containing halide is useful in industrial applications. The Examiner notes that replacing one reagent with another reagent or variation of process conditions in a chemical reaction is a well-known chemical practice to optimize the process efficiency of the system and does not constitute a patentable distinction.

Moreover, all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

**Applicants are queried as to the reasons for the proviso clause: provided that when none of  $R^1$ ,  $R^2$  and  $R^3$  is a fluorine atom, at least one of  $R^1$ ,  $R^2$  and  $R^3$  is a monovalent fluorine-containing hydrocarbon group. If it is in order to avoid art, applicants are requested to provide the examiner with a copy of the said art and to specifically identify where in the prior art the proviso compounds can be found.**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chukwuma O. Nwaonicha whose telephone number is

571-272-2908. The examiner can normally be reached on Monday thru Friday, 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Sullivan can be reached on 571-272-0779. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Chukwuma O. Nwaonicha/  
Examiner, Art Unit 1621

/Sikarl A. Witherspoon/  
Primary Examiner, Art Unit 1621

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Daniel Sullivan  
Supervisory Patent Examiner,  
Technology Center 1600